NAUTICOMP

Signature Series

Operating Instructions

10.4", 12", 15" and 18"
LCD Monitors

CONTACT INFORMATION

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INTRODUCTION

The Signature Series from Nauticomp is a range of premium color LCD monitors utilizing TFT type active matrix LCD's. The monitors are available in 10.4", 12", 15" and 18" diagonal screen sizes.

All Signature Series monitors are designed to be used in industrial and harsh environments. The chassis enclosure is constructed of high-grade welded aluminum with an industrial powder coat finish to withstand the stress of industrial applications. The monitor has a scratch-resistant, tempered glass faceplate to protect the LCD panel from accidental damage. The enclosure is sealed and is waterproof to a level compliant with NEMA 4X industry standards.

The Signature Series operate with standard PC's or Notebooks that have a normal graphics card installed. The display is crisp, clear and has a high-speed response time suitable for showing video, animation and multimedia applications.

Please read through this manual in its entirety before connection of any equipment.

CONTENTS

SYSTEM AND INSTALLATION

System Includes
- LCD monitor
- Cable for VGA connection
- Cable for Power/RCA connection
- Power supply: 12, 24 VDC or 36 VDC to DC converter or 120V AC inverter supplied to regulate a 12.4V DC input to the display
- ABS Dust cover on 12" and 15"

Check that all parts have been included before proceeding

Hardware Requirements
- IBM AT, Pentium compatible processor with standard graphics card with 15 pin analog VGA output.
- Video source if equipped – NTSC or PAL, VCR, DVD, Camera or similar

Installation And Setup
Nauticomp Signature Series
- Prepare the computer for connection by setting the monitor resolution to match the resolution of the Signature Series or lower
  12" = Display Inputs - VGA, SVGA, XGA, SXGA, UXGA, Composite Video & PIP
  Native Resolution - 800 x 600
  15", 18" = Display Inputs - VGA & SVGA & XGA, SXGA, UXGA, Composite Video & PIP
  Native Resolution – 15" - 1024 x 768
                     18" – 1280 x 1024
- Power OFF the computer
- Connect power supply to input source
- Connect the monitor to the computer using the VGA cable provided
- Connect the monitor to the power supply using the power cable
- Red wire to the +V output, black wire to the –V output
- Turn ON the computer THEN the monitor by pressing and holding the power button for one second.

Display Installation
- Displays can be Flush Mounted, Pedestal (RAM) Mounted or Embedded.
- All Signature Series Displays come standard with an Embedding Ring.
- Select method of installation and obtain correct cut –out specifications.
- Each display will have a template enclosed in the packaging.

ON SCREEN DISPLAY SETTING

First Time Setup

Turn on the monitor by pressing and holding the Power button on the front of the unit for one second. Using the brightness up and down buttons adjust for desired backlight brightness.

- **Press the menu button**
- **Keep pressing MENU button until you get to the utilities function**
- **Press " SEL ^ " button once (Load Factory Defaults should appear)**
- **Press " ADJ ^ " button twice**
- **Auto Setup is complete**

Select the brightness and contrast functions within the menu and adjust for your own personal viewing preference.

SWITCHES AND FUNCTIONS

Front Mount Buttons

BRIGHTNESS UP

BRIGHTNESS DOWN

MENU

SELECT UP

SELECT DOWN

ADJUST UP

ADJUST DOWN

ON / OFF POWER

Screen Front and Back

MEMBRANE CONTROL BUTTONS

Controls For 10.4", 12", 15" and 18" Signature Displays

- **Brightness Up**   - Increases the backlight brightness
- **Brightness Down**   - Decreases the backlight brightness
- **Menu**   - Displays the On Screen Display menu (OSD)
- **Select Up**   - Moves the highlighted menu selection up
- **Select Down**   - Moves the highlighted menu selection down
- **Adjust Up**   - Increments the selected menu parameter
- **Adjust Down**   - Decrements the selected menu parameter
- **On / Off power**   - Switch On or Off of the monitor
                         (Depress and hold for one second)

To turn on the OSD Menu: Press the MENU button
Move to next icon: Press the MENU button
Select options within icon menu: Use SEL UP/SEL DOWN,
                                    the selected option is in yellow

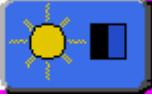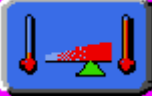Increase/decrease setting: Use +/- buttons
Move selection left/right: Use +/- buttons, the selected option is in green
To confirm the selection: Use +/- buttons
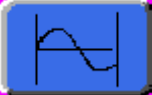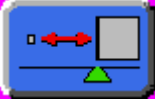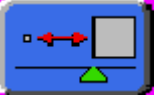
On Screen Display Functions

	Brightness and Contrast: Brightness _[slider]_ Increase/decrease panel brightness level, total: 100 steps Contrast _[slider]_ Increase/decrease panel contrast level, total: 100 steps
	Color Temperature: 9500K / 8000K / 6500K / 5000K Adjust the warmness of the image displayed. The higher the temperature the coolest image looks like. The lower the temperature the warmest image looks like.
	Video Adjustment: (DISPLAYED IN VIDEO MODE ONLY) Color: _[slider]_ Adjust video color level Tint: _[slider]_ Adjust video tint level Sharpness: _[slider]_ Adjust Video image sharpness level Video Type: DVD / VCR Change brand width to match the source
	Frequency and Phase: (DISPLAYED IN PC MODE ONLY) Frequency _[slider]_ Adjust the image horizontal size Phase _[slider]_ Fine tune the data sampling position (Adjust image quality)
	Video System: (DISPLAYED IN VIDEO MODE ONLY) Select video system and input signals AUTO: automatic detection of NTSC and PAL system (Not applicable in SECAM system) NTSC / NTSC 4.43: Manual select NTSC system PAL / PAL M: Manual select PAL system SECAM: Manual select SECAM system
	Status: (DISPLAYED IN PC MODE ONLY) Display graphic information: resolution and frequency
	Position: Image Up/Down: Use SEL UP / SEL DN to move the image vertically Image Left/Right: Use -/+ to move the image horizontally
	Rotation: (DISPLAYED IN VIDEO MODE ONLY) Rotates the image from landscape format to portrait format

	Picture In Picture: (DISPLAYED IN PC MODE ONLY)
	PIP Size: 24 Different Sizes
	  Select PIP window size: close, size 1, size 2 and size 3
	PIP Source: Auto / Comp / Svid / YCbCr
	  Select video source to be displayed in PIP window:
	  Auto–automatic detection of Composite, S-video and component
	  Comp-manual select composite video only

	SVid-manual select S-video only
	YCbCr-manual select component video only
	Horizontal Position: [slider] adjust the position of the PIP window horizontally
	Vertical Position: [slider] adjust the position of the PIP window vertically
	Advanced PIP Settings:
	    Brightness [slider] adjust the image brightness of the PIP window
	    Contrast [slider] adjust the image contrast of the PIP window
	    Sharpness [slider] adjust the image sharpness of the PIP window
	    Tint [slider] adjust the tint of the image of the PIP window
	    Color [slider] adjust the color of the image of the PIP window

[icon]	**Video Scaling:** (DISPLAYED IN VIDEO MODE ONLY) Use the UP and DOWN arrow keys to select the following scaling models. Normal Letterbox Letterbox with Subtitles Nonlinear Scaling Modes: Horiz Clipping / Horiz Offset / Horiz Stretch / Vert Clipping / Vert Offset / Vert Stretch

[icon]	**Graphic Scaling Modes:** (DISPLAYED IN PC MODE ONLY)
	Use the UP and DOWN arrow keys to choose a scalar mode.
	Use the + or – key to modify the following scalar parameters.
	One to One:
	    Horizontal Pan [slider]
	    Vertical Pan [slider]
	Fill Screen: enable full screen expansion for lower resolution image
	Fill to Aspect ratio: enable fill screen expansion for lower resolution image according to aspect ratio.
	Nonlinear Scaling Modes: Horiz Clipping / Horiz Offset / Horiz Stretch /
	    Vert Clipping / Vert Offset / Vert Stretch

[icon: Language]	**Language:** Select OSD menu language display
	  1. English
	  2. Danish

[icon]	**Video Source:** Select the input video signal Analog RGB / Component Video / Composite Video / S-Video

	Utilities:
	User Setting: User Timeout: adjust the OSD menu timeout period in a step of 5 seconds
	        DPMS: Disable / Enable the DPMS function
	        Auto Source Select:
	            Off – Disable auto source select function.
	            Low – Auto Source select enable ONLY in power up.
	            High – Auto source select ALWAYS enable.
	        Gamma: 1.0 (Default Setting)
	               1.6
	               2.2
	OSD Setting: OSD Horiz Position: move the OSD menu horizontally
	        OSD Vert Position: move the OSD menu vertically
	        OSD Background: Translucent / Opaque
	        OSD Rotate: Normal / Rotate
	Freeze Frame: Freeze the image (use "+" button)
	Zoom: Zoom level: enable the zoom in function on the image displayed.
	        Use "+" button to zoom in the image.
	        Use "-" button to decrease the zoomed image.
	   Horizontal Pan:
	   Vertical Pan:
	Direct Access #1: Define the hot key function ("+" and "-") for the following adjustments: Brightness / Contrast / Volume / Freeze / Zoom / Video Source* / PIP
	Display Orientation: Normal / Horizontal Inverse / Vertical Inverse / Inverse
	Calibrate RGB Gain: Color Calibration (DISPLAYED IN PC MODE ONLY)
	Load Factory Defaults: Recall factory default settings.
	* By pressing the hot key, the source is in sequence of Analog RGB/Composite Video/S-Video/Component Video.

	Volume: Adjust the audio volume level (Functions only if the audio add-on installed)
	Exit Menu

The OSD settings chosen will be stored in memory. The OSD menu can be cleared from the screen by moving the selection bar to the EXIT icon pressing the + button otherwise it will automatically clear after a few seconds (time-out period) of non-use.

DIRECT ACCESS FUNCTIONS

Analog, Composite and Picture in Picture
The control buttons also provide for a user–programmable hot keys for a shortcut to often used functions. The hot key functions are employed by pressing the buttons without first displaying the menu.
In the default state, depression of the Select Up and Select Down buttons will increment or decrement the brightness function. As the buttons are pressed, an on-screen message showing brightness and an adjustment scale will be displayed and then turned off automatically after a few seconds.
In the default state, depression of the Adjust up and Adjust down buttons will increment or decrement the contrast function. As the buttons are pressed, an on-screen message showing contrast and an adjustment scale will be displayed and then turned off automatically after a few seconds.

"Dim to Red" Function
Using the BRIGHTNESS DOWN button and adjusting it to the lowest possible setting activates the "Dim to Red" function. You can then adjust the Brightness and Contrast of the "Dim to Red" by pressing the MENU button and selecting Brightness and Contrast, or by using the SEL UP and SEL DOWN for Brightness and ADJ UP and ADJ DOWN buttons for Contrast.

Default Selections
When the monitor is shipped from the factory, all of the menu parameters are set to a nominal set of values that should meet most applications. In the event that the user has incorrectly set some parameters, the factory defaults may be restored. Turn off the monitor; hold down the select button while powering on the monitor. Continue to hold the select down button until the message "Loading Defaults" is displayed.

Connectors:
- **VGA Input**: It is recommended that the cable fixing screws be tightened to hold the connector firmly in VGA input port at the monitor back. Do not use an alternative cable as incorrect pin assignments may cause damage and invalidate warranty.
- **Composite Input**: RCA style connector for composite video input
- **Power Input**: 12.4V DC input from DC/DC Converter as provided with the monitor.

Connector Style 1
**Available with the 10.4" 12"
and 15" displays**

Connector Style 2
Standard on 18" displays

PRECAUTIONS

- Always connect display to DC power through supplied DC/DC converter
- Never connect the monitor to the computer when the computer is on.
- Take care not to drop the unit or subject it to a shock, as the LCD is fragile.
- Never open the casing. There are no user serviceable parts inside and the warranty will be **VOID**
- Do not use corrosive or abrasive cleaning agents on the casing or display, as they are likely to cause serious damage.
- Do not use cables or power supplies other than those supplied with the monitor, this may cause damage and will invalidate the warranty.
- Only use a power source that is suitable for the power supply.

SPECIFICATIONS

Input auto-synchronization	RGB Analog (0.7Vp-p); Separate Sync; Composite Sync or Sync-on-Green. Maximum vertical refresh rate 120Hz
Standard VGA input	15-pin mini D-sub (Female)
Composite Video input	Industry standard BNC type connector
Native Resolution	Day/Sun12: 800 x 600 Day/Sun15: 1024 x 768 Day/Sun18: 1280 x 1024
Display Area (approx.)	Day/Sun12: 12" diagonal Day/Sun15: 15" diagonal Day/Sun18: 18" diagonal
Display panel type	Optically Enhanced TFT
Display backlight type	Cold cathode fluorescent tube
Operating temperature – typical	32 to 140 degrees F
Monitor Controls & Functions	Power On/Off - Membrane Button Backlight Brightness – Membrane Button Panel Brightness -OSD menu Contrast -OSD menu Phase -OSD menu Size -OSD menu Image position (V & H) -OSD menu
Indicator	LED – (Membrane backlight)Green - Power on Red – No Video Input
Settings memory	Settings are stored in non volatile memory
Power saving / Standby mode	If no signal input then auto power down (VESA DPMS)
Dimensions (housing, not including the stand)	Sun10.4: 11.62"Wx8.84"Hx3.66"D Day12: 12.9"W x 9.88"H x 3.90"D Sun12: 12.9"W x 9.88"H x 3.90"D Day15: 15.4"W x 11.6"H x 4.00"D Sun15: 15.4"W x 11.6"H x 4.00"D Day18: 17.6"W x 13.95"H x 4.50"D Sun18: 17.6"W x 13.95"H x 4.50"D
Weight	10.4"=5.25 lbs, 12" = 8 lbs, 15" = 11.2 lbs, 18" = 21 lbs
Input voltage	Sun10.4- 12.4V DC @ 3.5A Day12 – 12.4V DC @ 2.2A Sun12 – 12.4V DC @ 3.5A Day15 – 12.4V DC @ 2.8A Sun15 – 12.4A DC @ 5.4A Day18 – 12.4V DC @ 4.2A Sun18 – 12.4V DC @ 7.5A
Power supply	100 – 240V AC 50/60 Hz input, 12V DC 4.2A output, regulated.
Power protection	Fuse fitted - auto reset

TROUBLE SHOOTING
TECHNICAL SUPPORT – 1-800-267-9491

In the event of an apparent problem consideration should be given to following:
- Computer system - check this is operating correctly.
- Power supply - ensure there is power and that the monitor is turned on
- Monitor - see notes below for checking the LCD monitor.
- The VGA card - ensure this is functioning correctly.

Any one of these may affect the results. In particular we always recommend using a good quality VGA card that provides a stable signal.

If serious vertical banding appears on the display or flickering or distorted image:
- Perform the auto-setup function as defined in the "first time setup"(pg.6)
- If necessary adjust the horizontal image size function in the menu to reduce the banding effect. If not adjustable then the problem is likely a poor quality video source and another system should be tried.

If the image is unstable or pixels are unstable/flicker or some ghosting is visible:
- Try adjusting the tuning control, try clicking up to 6 times.
- Adjust the contrast.
- The VGA card may be providing an unstable signal, which may not show up on CRT monitors, try another VGA card or another computer.
- For SVGA or XGA models - check the setting of the screen width using OSD function (see Switches and Functions).
- Be sure the VGA cable is not run near any AC power lines.

No image appears on the screen:
- Check all connections, power and VGA cable.
- Ensure the power supply is operating.
- Check On/Off switch and brightness controls.
- Try connecting another monitor to the computer to see if the signal is ok.

The backlight will not come on:
- Check if the power supply is working and correctly connected.
- The sun 12" has a safety circuit built into it so that the backlight will not come on if there is no VGA signal.

The image scrolls vertically:
- Try changing the VGA card's setting to a different vertical refresh rate.
- Try using another computer and/or VGA card.

REGULATORY COMPLIANCE

The Signature Series monitors are fully compliant with worldwide regulatory certification and are recorded under report number CE00-52 at CKC Laboratories.

EN50082-1 (1997)	EN55103-1 (1996)
EN50082-2 (1995)	VCCI Class B (May 1999)
EN55024 (1998)	FCC Part 15 Subpart B Class B
EN55103-2 (1996)	CISPR 22/85 Class B (ANSI C63.4 1992)
EN55022 Class B (1995)	ICES-003 Class B
EN55011 Class B Group 1 (1991)	AS/NZS 3548 Class B (1995)
NEMA 4 Compliant	

Regulatory Notice

The use of shielded video cables is required when connecting this equipment to any and all optional peripheral or host devices. Failure to do so may cause interference and violate FCC and international regulations for electromagnetic interference.

WARRANTY

The Signature Series products are warranted against defects in workmanship and material for a period of one (3) year from the date of purchase provided no modifications are made to it and it is operated under normal conditions and in compliance with the instruction manual.

The warranty does not apply to:
- Product that has been altered or repaired except by the manufacturer (or with the manufacturer's consent).
- Product that has subjected to misuse, accidents, abuse, negligence or unusual stress whether physical or electrical.
- Ordinary wear and tear.
- The warranty is "VOID" on all products returned with broken seals or seals removed.

Except for the above express warranties, the manufacturer disclaims all warranties on products furnished hereunder, including all implied warranties of merchantability and fitness for a particular application or purpose. The stated express warranties are in lieu of all obligations or liabilities on the part of the manufacturer for damages, including but not limited to special, indirect consequential damages arising out of or in connection with the use of or performance of the products.

LIMITATION OF LIABILIITY

The manufacturer's liability for damages to customer or others resulting from the use of any product supplied hereunder shall in no event exceed the purchase price of said product.

TRADEMARKS

- **Nauticomp** is a trademark of **Nauticomp Inc.**
- **Signature Series** is a trademark of **Nauticomp Inc.**

Trademarks are the property of their respective owners.

DISCLAIMER

There is no implied or expressed warranty regarding this material.

Specifications subject to change without notice
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